



### **Code Requirements Checklist for Commercial Buildings**

The items listed below are items commonly omitted from plans. Any of the listed items may be required to satisfy a given project. Advance preparation by applicants to satisfy these items will help expedite the plan review process.

#### **A. CLEARANCE REQUIREMENTS**

Planner plan check approval may be required.

1. Electrical /plumbing/mechanical plan check approval may be required.
2. County Fire plan check approval may be required.
3. Additional plan check fees may be required for extensive plan changes.
4. Additional plan check fees may be required for insufficient correction progress.

#### **B. DOCUMENTATION**

1. All sheets of the plans and first sheet of the calculations must be stamped and signed by a California licensed civil engineer or architect.
2. Wet signatures are required on the plans and calculations.
3. Minimum construction specifications, Form DPLU #81, must be made part of the plans.
4. Floor plans must be fully dimensional.
5. Specify the type of occupancy for each area.
6. Specify the type of construction for each building.
7. Specify the floor areas for each building.
8. Identify the proposed uses of all rooms and areas shown on the plans.
9. All special inspections required by UBC Sec. 1701 and all other structural inspections required by the design engineer or architect must be clearly identified in the construction documents. Sec. 106.3.4.1.
10. Complete DPLU #6 for all special inspections and identify all chosen special inspectors.
11. Note on plans: - These plans and all work shall comply with the California Building Standards Code found in the state of California Title 24 CCR as amended and adopted by the County of San Diego."
12. Provide a wall legend. The legend must identify existing walls, existing walls to be removed, and new walls.
13. Provide specific information regarding the proposed use (s) within the proposed building space (s).
14. Provide specific information regarding the types and quantities of all materials to be used or stored in the proposed building.

#### **C. SITE PLAN**

1. Submit two (2) sets of fully dimensioned plot plans drawn to scale.
  - a) Show location, size and use of all structures on the lot.
  - b) Identify all property lines, easements, distance to property line and distance between buildings.
2. Indicate distance from center line of street or alley to property line and distance from curb to property line.
3. Show north arrow on plot plan.

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4. Show lot drainage pattern on site plan and provide key elevations.
5. On the plot plan show the total area of land disturbance activity on the site.
6. Provide the Waste Discharge Identification Number (WDID) that is obtained from the State Water Resources Control Board (SWRCB) when the total area of land disturbance is one-acre or more. To obtain the WDID, State regulations require that a Notice of Intent (NOI) and a fee be filed with the SWRCB. Additionally, contact the SWRCB regarding their requirements for a Stormwater Pollution Prevention Plan (SWPPP).
7. Provide a complete Stormwater Management Plan (Form LUEG:SW).
8. Stormwater Management Plan (Form LUEG:SW) is incomplete.
9. On the site plan show each BMP selected on the Stormwater Management Plan.
10. Show Erosion Control method to be used on disturbed slopes.
11. Show Erosion Control method to be used on disturbed area with less than 5% slope.
12. Show a velocity reduction BMP at the outlet of each area where water flow will be concentrated. (SS-10 or RSD D-40)
13. Show sediment control around the downhill perimeter of all disturbed areas.
14. Show BMP for preventing off-site tracking of sediment.
15. Show the concrete washout on the plans.
16. Show how construction wastes and stockpiles will be containerized or completely surrounded by silt fence, straw wattles, or gravel bags. Show how construction waste and stockpiles will be covered with plastic sheeting or tarps during a rain event.

#### **D. SITE REVIEW**

1. Post site identification cards and call for a site inspection. Corrections D2 through D7 to be reviewed thereafter.
2. Grading permit and rough grading approval from DPW may be required.
3. A soils report may be required.
4. A compaction report may be required (2 copies).
5. Provide an approved copy of the DPW L-Grading Plan (if applicable).
6. *Note on plans:* Inspector will recheck for expansive soil and/or grading requirements at the first foundation inspection.
7. Show locations, width, thickness and details of driveway and parking lot construction. Include specifications for materials to be used.

#### **E. EXTERIOR WALL PROTECTION**

1. Show conformance with UBC Table 5-A for wall and opening protection.
2. Show all assumed property lines on plans as per UBC (Sec. 503.3).
3. All exterior walls within \_\_\_\_ feet of property line must be of at least \_\_\_\_ hour fire-resistive construction. Detail wall assembly on plans and site reference. (UBC Table 5-A)
4. In fire resistive exterior wall construction, the fire-resistive rating shall be maintained for such walls passing through attic areas or other areas containing concealed spaces (Sec. 709.3.1)
5. Openings are not permitted in any exterior wall located within \_\_\_\_ feet of a property line. (UBC Table 5-A)
6. Openings within \_\_\_\_\_ feet of a property line must be protected by a 3/4 hour rated fire assembly. (UBC Table 5-A)
7. Projections beyond the exterior wall shall not extend beyond:
  - a) a point one-third the distance to the property line from an assumed vertical plane where fire-resistive protection of openings is first required due to location on property (Sec. 503.2.1); OR
  - b) More than 12" (inches) into areas where openings are prohibited. (Sec. 503.2.1)

8. Combustible projections located where openings are not permitted or where protection of openings is required shall be of one hour fire resistive or heavy timber construction. (Sec. 705)
9. Cornices, eave overhangs, exterior balconies and similar architectural appendages must comply with the above requirements for projections. (Sec. 705)
10. Provide 30 inches high parapets (Sec. 709.4) at \_\_\_\_\_.
11. The uppermost 18 inches of parapets must have noncombustible faces. (Sec. 709.4 and Sec. 504.6.5)

#### **F. OCCUPANCY SEPARATION**

1. Show conformance with UBC Table 3B for occupancy separation.
2. Structural members supporting horizontal occupancy separations shall be protected by equivalent fire-resistive construction. (Sec. 302.2)
3. Openings in occupancy separation walls must comply with UBC Sec. 302.3.
4. Rubbish and linen chutes shall terminate in rooms separated from the remainder of the building by a one-hour occupancy separation. (Sec. 711.5)

#### **G. AREA REQUIREMENTS**

1. Show compliance with UBC Table 5B for allowable floor areas.
2. Provide an area analysis and specify all assumed area increases.
3. Identify area separation walls on the plans, and show extent.
4. Area separation walls (ASW) must comply with UBC Sec. 504.6.
  - a) ASW's shall not be less than \_\_\_\_\_ hour fire-resistive construction.
  - b) Openings in ASW are limited to 25% of ASW area.
  - c) Openings in ASW must have a \_\_\_\_\_ hour fire protection rating.
  - d) ASW must extend to the edge of all concealed spaces.
  - e) Detail fire assemblies at adjacent exterior walls.
  - f) ASW must be continuous to the foundation.
  - g) Provide parapets or one-hour roof returns.
5. Provide construction details for all ASW s.
6. Provide details for all penetrations of ASW s.

#### **H. TYPE OF CONSTRUCTION**

1. Show compliance with UBC Table 5B for height, number of stories and type of construction
2. Dimension grade and building height in all cross sections and elevations.
3. Comply with UBC Table 6A for type of construction specified:
  - a. Provide details for all fire protection assemblies.
  - b. Provide details for all shaft enclosures.
4. Usable space under the first story shall be enclosed and protected on the usable side as required for one-hour fire-resistive construction. (Sec. 712)

#### **I. FIRE RESISTIVE STANDARDS**

1. Provide details and cite references for all fire rated assemblies and openings.
2. Single layer gypsum board ceilings of fire assemblies must be supported at 16 inches o.c. maximum. (Table 7C)
3. Structural members in fire rated ceiling assemblies supporting loads from a floor and roof or more than one floor must be individually fire protected. (Sec. 704.2.6)

4. Through and membrane penetrations of fire-resistive walls shall be protected by an approved penetration firestop system tested in accordance with UBC and shall have an F rating of not less than the required rating of the wall penetrates. Specify the approved listing number and provide details of the firestop system on the plans. (Sec. 709.6.3)
5. Where through or membrane penetrations of fire-resistive walls are maximum 6" nominal diameter steel, ferrous or copper pipes or steel conduit and the opening is 144 sq. in. maximum, the annular space (144" sq. max.) shall be permitted to be protected per Sec. 709.6.1, exception. Specify the method of filling the annular space.
6. Openings for steel electrical boxes that do not exceed 16 sq. in. in area shall not exceed 100 sq. in. for any 100 sq. ft. of wall area, unless protected by an approved firestop system. The steel electrical boxes on opposite sides of the wall shall be separated by a min. horizontal distance of 24". (Sec. 709.7 exception)
7. Noncombustible penetrating items of membrane penetrations shall not be connected to combustible materials on both sides of the membrane. (Sec. 709.7)
8. Ceilings shall form continuous fire-resistive membranes; except for membrane penetrations of copper, sheet steel or ferrous plumbing pipes, ducts and electrical outlet boxes, provided the aggregate area of such penetrations do not exceed 100 sq. in. For any 100 sq. ft. of ceiling area and the annular space is protected in accordance with section 709.6 or 710.2 (Sec. 710.3)
9. Draftstops shall be installed in floor-ceiling assemblies so that the area of the concealed space does not exceed 1000 sq. ft. and so that the horizontal dimension between stops does not exceed 60 ft. Where approved automatic sprinklers are installed within the concealed space, the area between draftstops may be 3000 sq. ft. and the horizontal dimension may be 100 ft. (Sec. 708.3.1.1.3)
10. Draftstops shall be installed in attics, mansards, overhangs, false fronts set out from walls and similar concealed spaces so that the area between draft stops does not exceed 3,000 sq. ft. and the greatest horizontal dimension does not exceed 60 ft. Where approved automatic sprinklers are installed, the area between draftsops may be 9,000 sq. ft and the greatest horizontal dimension may be 100 ft. (Sec. 708.3.1.2.2)
11. Show the location and detail the construction of all draftstops (Sec. 708.3.1.3)
12. Provide fireblocks at the following locations (Provide details and reference on plans): (Sec. 708.2)
  - a) Concealed spaces of stud walls and partitions; including furred spaces, at the ceiling and floor levels at 10 foot intervals both vertical and horizontal.
  - b) Doubled or staggered studs.
  - c) Interconnections between concealed vertical and horizontal spaces such as occur at soffits, drop ceilings and cove ceilings.
  - d) In openings around vent pipes, ducts, chimneys, fireplaces and similar openings that afford passage for fire at ceiling and floor levels, with non-combustible materials.
  - e) At openings between attic spaces and chimneys chases for factory-built chimneys.
13. Smoke and fire dampers are required at the following locations (Specify approved damper listings and detail the installation on the plans). (Sec.'s 713.10 and 713.11)
  - a) Penetrations of area or occupancy separation walls.
  - b) Penetrations of the fire-resistive construction of horizontal exit walls.
  - c) Penetrations of the fire-resistive construction of corridors serving as a means of egress.
  - d) Penetrations of shaft enclosures
  - e) Penetrations of areas of refuge.
14. Smoke dampers are required at the following locations (specify approved damper listings and detail the installation on the plans). (Sec. 713.10)
  - a) Penetrations of smoke barriers
  - b) Penetrations of elevator lobbies required by Sec. 1004.3.4.5.
15. Fire dampers are required at the following locations (specify approved damper listings and detail the installation on the plans). (Sec. 713.11)
  - a) Penetrations of the ceiling of fire-resistive floor-ceiling or roof-ceiling assemblies.
  - b) Penetrations of an atrium enclosure element.
  - c) Penetrations of the building exterior required to have protected openings per Table 5-A.
16. Openings extending vertically through floors shall be enclosed in a shaft of fire-resistive construction having a time period set forth in Table 6A for shaft enclosures. (Sec. 711.1) Detail the shaft construction and specify the opening protection per Sec. 711.4.
17. Interior wall and ceiling finish flame spread rating shall be as per UBC Chapter 8.
18. Construction joints installed in fire-restrictive walls required to have protected openings of floors shall be protected with an approved material or assembly which will provide the same degree of fire protection. (Sec. 706)

## **J. FIRE EXTINGUISHING SYSTEMS**

1. An automatic sprinkler system shall be installed as per UBC (Sec. 904.2):
  - a) Group A drinking establishments where the total area exceeds 5000 sq. ft.
  - b) Group A basements exceeding 1500 sq. ft.
  - c) Group A display or exhibition areas exceeding 12,000 sq. ft.
  - d) Enclosed usable space below or over stairway in A2, A2.1, A3 and A4 occupancies.
  - e) Every building containing a multitheater complex.
  - f) All amusement buildings.

- g) Stages as required in Section 904.2.3.7.
- h) Group F Woodworking occupancies over 2500 sq. ft.
- i) Retail sales rooms classified as M occupancies where the floor area exceeds 12,000 sq. ft. on any floor or 24,000 sq. ft. on all floors. (UBC Sec. 904.2.8)
- j) All H division 1, 2, 3 and 7 occupancies. (Sec. 904.2.6)
- k) H4 occupancies having a floor area exceeding 3000 sq. ft. (Sec. 904.2.6.2)
- l) H6 occupancies. The design of the sprinkler system shall be as per UBC Sec. 904.2.6.3.
- m) All I occupancies.

2. Standpipe systems shall be provided as set forth in UBC Table 9A.
3. Provide a fire alarm system in the following:
  - a) Group A divisions 1, 2, and 2.1 occupancies. (Sec. 303.9)
  - b) Group E occupancies with an occupant load of 50 or more. (Sec. 305.9)
  - c) Group H occupancies used for the manufacturing of organic coatings (Sec. 307.9) and H-6 occupancies (Sec. 307.11.5.5).
  - d) Group I, Division 1.1, 1.2 and 2. occupancies. (Sec. 308.9)
  - e) Group R-1 Hotels containing 20 or more guest rooms (Sec. 310.14.12.1).

## K. EXITS

1. The second story shall be provided with not less than two exits when the occupancy load is ten or more. (Sec. 1004.2.3.2)
2. Occupants on floors above the second story and in basements shall have access to not less than two separate exits from the story or basement. (Sec. 1004.2.3.2).
3. Exits or exit-access doorways from \_\_\_\_\_ shall be placed a distance apart equal to not less than one half of the length of the maximum overall diagonal dimension of the area served measured in a straight line between the center of such exits or exit access doorways (Sec. 1004.2.4).
4. Exit from \_\_\_\_\_ can not pass through \_\_\_\_\_. (Sec. 1004.2.2)
5. The maximum travel distance from \_\_\_\_\_ shall not exceed the limitations set forth in Sec. 1004.2.5.
6. Required exit doors shall not be less than 36 inches in width and not less than 6 feet 8 inches in height. No door leaf shall exceed 4 feet in width. (Sec. 1003.3.1.3 and 1003.3.1.4)
7. Note the following on the plans: "Exit doors shall be openable from the inside without the use of a key or any special knowledge or effort." (Sec. 1003.3.1.8)
8. Exit doors shall swing in the direction of the path of exit travel where the area served has an occupant load of 50 or more. (Sec. 1003.3.1.5)
9. Every corridor and hallway serving an occupant load of 50 or more shall not be less than 44 inches in width. All others must be at least 36 inches in width. (Sec. 1004.3.3.2 and 1004.3.4.2)
10. Provide one-hour construction for corridor walls and ceilings (Sec. 1004.3.4.3) Detail the construction of the corridor (Sec. 1004.3.4.3.1)
11. Doors in corridors must be a minimum of 20 minute rated with self-closures or automatic closures with smoke detectors. (Sec. 1004.3.4.3.2.1) Smoke and draft control assemblies shall be provided with a gasket installed so as to provide a seal where the door meets the stop on both sides and across the top.
12. Elevators opening into a corridor shall be provided with an elevator lobby at each floor containing such a corridor. The lobby shall completely separate the elevators from the corridor by construction conforming to Sections 1004.3.4.3.1 and all openings into the lobby wall contiguous with the corridor shall be protected as required by Section 1004.3.4.3.2.
13. Window openings in a corridor shall not exceed 25% of the wall area of the adjacent room. (Sec. 1004.3.4.5)
14. Windows in corridor walls must be protected by fixed, approved glazing with at least a 3/4 hour fire-protection rating. (Sec. 1004.3.4.3.2.2)
15. Dead-end corridors and hallways are limited to 20 feet in length. (Sec. 1004.2.6)
16. The width, in inches, of any component in the means of egress system shall not be less than the product determined by multiplying the total occupant load served by such component by the applicable factor set forth in Table 10-B. In no case shall the width of an individual means of egress component be less than the minimum required for such component. Show compliance for \_\_\_\_\_ Sec. 1003.2.3.2).
17. See UBC Sec. \_\_\_\_\_ for special exiting requirements for group \_\_\_\_\_ occupancies. Show compliance on plans. (Sec. 1007)
18. Exit and exit-access doors serving Group A and H Division 1,2,3,6 & 7 occupancies shall not be provided with a latch or lock unless it is panic hardware. (Sec. 1007.4.5)
19. Revolving, sliding and overhead doors serving an occupant load of 10 or more shall not be used as required exits. (Sec. 1003.3.1.2)
20. Exit signs must be provided when two or more exits are required from a room or area. Indicate the location of all exit signs to clearly show the direction of egress. (Sec. 1003.2.8)
21. Non-sprinklered Group A occupancies require floor-level exit signs per Sec. 1007.2.8. Show locations on plans.

## **L. STAIRWAYS**

1. Show stairways and landings. (Sec. 1003.3)
  - a. Minimum landing depth.
  - b. Risers between 4" and 7". Min. run of 11".
  - c. Headroom clearance of 6' - 8'.
  - d. Width.
  - e. Handrail height of 34" - 38" above the tread nosing.
  - f. Handrails on each side.
  - g. Distance between landings (12' maximum vertically).
  - h. Structural details.
  - i. Noncombustible construction.
2. Provide a 42-inch minimum height guardrail. The maximum opening between railings is 4 inches. (Sec. 509)
3. Spiral stairs for use as required exits are not allowed. (Sec. 1003.3.3.8.3)
4. Enclosed usable space under stairs must be protected with one-hour fire-resistive construction on the enclosed side. (Sec. 1003.3.3.9)
5. Interior stairways must be enclosed. (Sec. 1005.3.3.1)
6. Openings into exit enclosures are limited to those necessary for exiting from a normally occupied space into the enclosure and exiting from the enclosure. (Sec. 1005.3.3.5)
7. Exit doors in exit enclosures shall be protected by fire assemblies having a \_\_\_\_\_ hour rating and shall be self-closing or automatic closing by actuation of a smoke detector.
8. Exterior exit balconies and stairways shall not project into yards where openings are not permitted or protection of openings is required. (Sec. 1006.2.1)
9. There shall be no enclosed usable space under stairways or ramps in a exit enclosure. (Sec. 1005.3.3.6)

## **M. ROOFING**

1. Specify roof pitch.
2. Specify roof material and underlayment.
3. Specify ICBO report number for tile roof.
4. Show roof drains and overflows. (UBC Sec. 1506)
  - ⊗ overflow inlets shall be 2" above the low point of the roof
  - ⊗ overflow drain lines shall not be connected to roof drain lines.
5. Specify ICBO report number for skylights.
6. Provide min. 30# felt underlayment for concrete tile and 40# felt for clay tile..
7. Plastic skylight units shall be separated from one another by not less than 4 feet measured in a horizontal plane. (UBC Sec. 2603.7.1)
8. Skylights shall not be installed within that portion of a roof located within a distance to property line or public way where openings in exterior walls are prohibited or require protection. (Sec. 2603.7.1)
9. Provide a fire retardant roof class \_\_\_\_\_, per UBC Table 15A.
10. Provide minimum 1/4 inch per foot roof slope or design roof for ponding (submit calculations). (Sec. 1506.1)
11. Specify approved waterproof decking material for decks over interior spaces. (Sec. 1402.3)
12. Show calculation of a required attic ventilation area, vent sizes and location of vents per UBC Sec. 1505.3.

## **N. LIGHT, VENTILATION AND SANITATION**

1. Window area must be at least 1/10 of the floor area, minimum 10 sq. ft. (Sec. 1202.1) in \_\_\_\_\_.
2. One-half of all required window area must be openable (Sec. 1202.2.1) \_\_\_\_\_
3. Provide a 3 sq. ft. window in water closet rooms. (Sec. 1202.2.1)
4. Mechanical ventilation system requirements are:
  - a) Provide 15 cfm per occupant total with 5 cfm per occupant of outside air Groups A, B, E, F, H, I, M and S occupancies. (Sec. 1202.2.1)
  - b) Provide 1.5 cfm per sq. ft. of gross floor area or 14,000 cfm for each vehicle in parking garages. (Sec. 1202.2.7)
  - c) Minimum 6 air changes per hour is required for areas where flammable liquids are used. (Sec. 1202.2.2)
  - d) Provide 1 cfm per sq. ft. for automobile repair garages. (Sec. 1202.2.4)
  - e) Provide 300 cfm for engine repair stall ducts over 10 feet in length. (Sec. 1202.2.4)
5. Provide a minimum of one drinking fountain for each floor level in Group A or E occupancies. (Sec. 2902.2 and 2902.4)
6. Sanitary facilities are required as follows:

- a) One lavatory for each two water closets for each sex in Group A occupancies. (Sec. 2902.2)
  - b) Provide a minimum of one water closet in Group B, F, H, M and S occupancies where persons are employed. (Sec. 2902.3)
  - c) Provide separate facilities for each sex in Group B, F, H, M and S occupancies when the number of employees exceeds 4. (Sec. 2902.3)
7. Provide fans for interior baths.
  8. A room in which a water closet is located shall be separated from food preparation or storage rooms by a tight-fitting door. (Sec. 302.6)
  9. Toilet room floors shall have a smooth, hard, nonabsorbent surface which extends upward onto the walls at least 5 inches. (Sec. 807.1.1)
  10. Walls within water closet compartments and walls within 2 feet of the front and sides of urinals shall be smooth, hard, nonabsorbent surface (to a height of 4 feet). (Sec. 807.1.2)
  11. Floors in S3 and S5 occupancies where motor vehicles, boats, motor vehicle fuel-dispensing stations and repair garages shall drain to an approved oil separator or trap discharging to sewers in accordance with the U.P.C. (UBC Sec. 311.2.3.1)

#### **O. SAFETY GLAZING**

1. Safety glazing (tempered) is required (UBC Sec. 2406.4) for:
  - a) Windows adjacent to hot tubs, swimming pools, whirlpools, saunas, steam rooms, bathtubs and showers and within 60" of the floor;
  - b) Windows within 24" arc of either vertical edge of doors in the closed position where the bottom edge of the window is within 60" of a walking surface;
  - c) Windows greater than 9 square feet and within 18" of a walking surface;
  - d) Windows in walls enclosing stairway landings or within 5' from the bottom and top of stairways where the bottom edge of glass is less than 60" above a walking surface.

#### **P. VERTICAL ANALYSIS**

1. Provide complete roof and floor framing plans.
2. Provide complete framing sections.
3. Provide two sets of engineering calculations prepared by a licensed civil engineer or architect for \_\_\_\_\_.
4. Concentrated and uniform live loads used in analysis must be at least that required by UBC Table 16A.
5. See UBC Table 16B for special loading requirements at.
6. Detail all column to beam and column to footing connections.
7. Show support for concentrated loads.
8. Show all recommendations made in engineering calculations on the plans.
9. Provide support for all veneer and specify the veneer anchorage (Sec. 1403.4)
10. Floors in office buildings and other buildings where partition locations are subject to change shall be designed to support, in addition to all other loads, a uniformly distributed dead load equal to 20 p.s.f. of floor area.(Sec. 1606.2).

#### **Q. LATERAL ANALYSIS**

1. Provide a complete lateral analysis prepared by a California licensed civil engineer or architect.
2. Identify all subdiaphragms and cross-reference them to the plans.
3. Detail diaphragm boundaries and nailing on plans.
4. Maintain diaphragm dimension ratios. (Table 23-II-G)
5. Provide adequate lateral support for \_\_\_\_\_.
6. When the soil properties are now known, soil profile  $s_D$  shall be used (Sec. 1629.3).
7. Justify the near source factor  $N_a$  used in the engineering calculations (Tables 16-S and 16-U).
8. Provide calculations for  $\Delta$  (redundancy/reliability factor). The earthquake load due to the base shear shall be multiplied by  $\Delta$  (Sec. 1630.1.1)
9. Toe nails are not permitted to transfer lateral forces greater than 150 p.l.f. (Sec. 2318.3.1)
10. Where allowable shear values exceed 350 pounds per foot, sill plates and all framing members receiving edge nailing from abutting panels shall not be less than a single 3-inch nominal member. (Tables 23-II-I-1 and 23-II-I-2).
11. In storage and warehouse occupancies a minimum of 25 percent of the floor live load shall be included in the seismic dead load (Sec. 1630.1.1).

12. Where a partition load is used in the floor design, a load of not less than 10 p.s.f. shall be included in the seismic dead load (Sec. 1630.1.1).
13. Wind load must be based on exposure \_\_\_\_\_. (Sec. 1619, Table 16G)
14. Base overturning moment due to wind may not exceed 2/3 the dead load resisting moment. (Sec. 1621)
15. R factor used in seismic analysis must be \_\_\_\_\_.
16. Shear values for gypsum wall board must be reduced 50%. (UBC Table 25I footnote 1)
17. Dead loads must be multiplied by 0.90 when used to resist uplift due to seismic loads. (Sec. 1612.3.1)
18. Story drift may not exceed the value set forth in Sec. 1630.10.2. Provide drift calculations.
19. Provide anchorage for concrete and masonry walls per U.B.C. Sec. 1611.4.
20. Specify the I.C.B.O. number and detail lateral bracing for all suspended ceilings. (UBC Table 16-0)
21. Detail method of installing all interior partitions.
22. Show on plans all recommendations made in engineering calculations.
23. Provide metal drag straps connecting to plate lines on each side of flush beams where the plate line is interrupted.
24. Provide shear transfer connection detail for shear walls (interior and/or exterior) at roof, floors, and foundation.

## **R. WOOD**

1. Balloon frame walls of rooms with sloping ceilings. Specify on plans which walls are balloon framed.
2. For bearing walls, maximum unbraced height of laterally unsupported 2x4, 3x4 and 2x6 studs is 10'-10". (Table 23-IV-B)
3. For non-bearing walls, maximum unbraced height of laterally unsupported studs is (Table 23-IV-B):
  - a) 14'-0" for 2x4 and 3x4's.
  - b) 20'-0" for 2x6's.
4. Specify plywood grade and panel span rating for roof and/or floor sheathing. (Table 23-II-E-1)
5. Provide two complete sets of truss drawings and calculations. Truss layout on plans must identify trusses by file number.
6. Specify 1/2 inch clearance between trusses and non-bearing walls.
7. Specify all header sizes.
8. Ridge, hip and valley framing to be not less in depth than the cut end of the supported rafters. (Sec.2320.12.3)
9. Roof pitch less than 3:12 - design ridge as a vertical load carrying member. (Sec. 2320.12.1)
10. Provide rafter ties to rafters where ceiling joists are perpendicular to the rafters. (Sec. 2320.12.6)
11. Brace ridge and purlins, hips and valleys to interior bearing walls per UBC Sec. 2320.12.7).
  - a) The unbraced length of struts shall not exceed 8 feet.
  - b) The minimum slope of the struts shall not be less than 45° from the horizontal.
12. Show support for ridge/hip/valley intersections.
13. Provide metal straps across ridge beams and rafters.
14. Use solid blocking or plywood sheathing to brace cripple walls having a stud height 14 inches or less. (Sec. 2320.11.5)
15. Note on plans: A certificate of conformance is required prior to framing inspection for all glue laminated wood members.
16. Specify camber requirements and combination symbol for all glue-laminated wood members on plans.
17. Floor joists and rafters 12 inches in depth and spanning more than 8 feet shall be supported laterally by bridging, full-depth solid blocking or cross bracing at intervals not exceeding 8 feet unless both edges are held in line.
18. Wood members shall not be used to permanently support the dead load of any concrete or masonry. (Sec. 2307)

## **S. FOUNDATION PLANS**

1. Foundation plans must be fully dimensioned.
2. Show on plans all recommendations from soils or compaction reports.
3. Specify and detail water proofing of basement walls.
4. Show size, embedment and location of hold down anchors on foundation plan.



5. Show adequate footings under all shear and bearing walls.
6. Specify size, ICBO number and manufacturer of power driven pins. Show edge and end distances and spacing.
7. Note on plans that hold down anchors must be tied in place prior to foundation inspections.
8. Show stepped footings for slopes steeper than 1:10.
9. Horizontal distance from bottom of leading edge of footing to daylight shall be 7'-0" minimum or as recommended by soils report. (County Grading Ordinance)
10. Specify maximum height of stem walls.
11. Provide tension resisting reinforcement at footings under moment resisting frames ("hair-pins" or continuous cross ties).
12. Foundations and stem walls shall be provided with a minimum of one No. 4 bar at the top and bottom of the footing. (Sec. 1806.7.1 and 1806.7.2)
13. Foundation plates or sills shall be bolted to the foundation or foundation wall with not less than 5/8" by 10" steel bolts embedded at least 7" into concrete or masonry and spaced not more than 6' apart. There shall be a minimum of two bolts per piece with one bolt located within 12" of each end of each piece. Plate washers a minimum of 2" X 2" X 3/16" thick shall be used on each bolt. (Sec. 1806.6)
14. Compressive strength (f'c) of concrete members resisting earthquake induced forces shall not be less than 3000 psi. Not less than 2500 psi for footings of buildings three stories or less. (Sec. 1921.2.4.1)
15. Restrained walls must be shored prior to backfilling (note on plans).
16. Detail connections at tops of restrained walls.
17. Specify the maximum height and detail the construction of all retaining walls.
18. For retaining walls, steel reinforcement should be located on the tension side of the wall.
19. Design masonry retaining/restrained walls for combined axial and bending loads. (Sec. 2107.2.7)

#### **T. ENERGY CONSERVATION**

1. Submit applicable energy documentation forms ENV-1 through ENV-3, MECH-1 through MECH-4 and LTG-1 through LTG-4, and other applicable required documents.
2. Energy forms ENV-1, parts 1 and 2, MECH-1, parts 1 and 2, and LTG-1, parts 1 and 2, must be fully signed, and made a permanent part of the plans.
3. Shell buildings must comply as follows:
  - a) When no HVAC or lighting is proposed the envelope must comply. Submit forms ENV-1 through ENV-3.
  - b) If HVAC or lighting system is proposed at time of construction, compliance of each proposed system, in addition to the building envelope, must be documented.

#### **U. ACCESSIBILITY**

1. Provide notes and details for all accessibility items.
  - a) Site Development and Accessible Route of Travel.
  - b) Parking, Passenger Drop-Off & Loading Zones
  - c) Pedestrian Ramps
  - d) Curb Ramps
  - e) Sanitary Facilities
  - f) Entrance, Exit, Doors & Areas for Evacuation Assistance
  - g) Stairways
  - h) Drinking fountains
  - i) Public Telephones
  - j) Alterations & Remodels in Existing Buildings
  - k) Elevators

#### **V. FIRE RESISTIVE CONSTRUCTION IN WILDLAND INTERFACE AREAS**

##### **BASIC REQUIREMENTS**

1. On the site plan show the location and dimension the size of the fuel modification zone. A minimum 100 feet fuel modification zone is required around all structures.
2. Skylights shall be tempered glass except when the structure is protected with an automatic fire sprinkler system.
3. In roof coverings where the profile allows a space between the roof covering and roof decking, the space at the eave ends shall be fire stopped to preclude entry of flames or embers. Provide a note on the elevation sheet specifying how this will be done. (County Building Code § 704A.2.6.)

4. Exterior wall surfaces must be non-combustible (stucco, masonry, cement fiber board, etc.). Plywood or ¾ inch drop siding may be used with an underlay of ½ inch fire rated gypsum board. (County Fire Code Appendix II-A § 26.2.3)
5. Combustible eaves, soffits and fascias shall be constructed as required in guidance document DPLU #198. Provide note on elevation sheet and provide eave details. (County Fire Code Appendix II-A § 26.2.5)
6. When approved by the Building Official eave vents may be provided if the vent is at least 12 inches from the wall and the vent is screened with ¼ inch maximum galvanized wire mesh.
7. All vents (roof, foundation, combustion air, etc.) must be louvered and covered with ¼ inch noncombustible, corrosion-resistant metal mesh. Turbine vents shall turn in one direction only.
8. Under floor areas shall be enclosed to the ground with exterior wall construction per item J3 above. (County Fire Code Appendix II-A § 26.3.6)
9. Paper faced insulation is not permitted in attics or other ventilated spaces.
10. Windows shall be tempered glass, multi-layered glass panels, or glass block having a fire-protection rating of not less than 20 minutes. Glazing frames made of vinyl shall have welded corners, metal reinforced in the interlock area. Provide note on elevation sheet and window schedule. Also, provide manufacturers' info documenting compliance. (County Fire Code Appendix II-A § 26.2.1)

**ADDITIONAL REQUIREMENTS WHICH MAY APPLY DUE TO SITE LOCATIONS AND CONDITIONS**

1. Skylights shall be tempered glass or a class "A" rated assembly. (County Fire Code Appendix II-A § 26.3.7)
2. Attic ventilation shall not be permitted in soffits, rakes, or eave overhangs.
3. Gutters and down spouts shall be constructed of non-combustible material, and designed to reduce accumulation of leaf litter and debris. Detail the proposed gutters and down spouts. (County Fire Code Appendix II-A § 26.3.3)
4. Exterior doors shall be approved ignition resistant construction, solid-core wood not less than 1 ¾" thick, or have a fire protection rating of not less than 20 minutes. Provide note on elevation sheet. (County Fire Code Appendix II-A § 26.3.4)
5. Projections such as decks, carports, balconies, patio covers, etc. shall be of non-combustible construction, fire-retardant treated wood, heavy timber construction, or one-hour fire-resistive construction. Detail the construction. (County Fire Code Appendix II-A § 26.3.6)
6. The first five feet of fences and other items attached to a structure shall be constructed of non-combustible material or meet the same fire-resistive standards as the exterior walls of the structure. Provide note on plot plan and/or elevation sheet. (County Fire Code Appendix II-A § 26.3.5)
7. All fire related notes must be in one place on the building elevation sheets.

**Resolution Conference for Plan Check Corrections**

This process provides customers an opportunity to have their concern regarding plan check corrections considered by County management. With the exception of customer service complaints, the applicant must make a good-faith effort to resolve his/her issues with project staff BEFORE applying for this process. Failure to do so will result in denial of the resolution conference request.

A Resolution Conference Request Form is available online at <http://www.sdcountry.ca.gov/dplu/bldgforms/index.html>. You may also obtain a form from your plan checker or by calling the Building Division at (858) 694-3711.